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VETERINARY MEDICINE IN THE USSR

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- USSR -

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## VETERINARY MEDICINE IN THE USSR

## Veterinary Medicine

Following is the translation of the entry signed by A. Mironov entitled "Veterinariya" (English version above) in Bol'shaya Meditsinskaya Entsiklopediya (Great Medical Encyclopedia), Vol V, 2nd Ed., Moscow, 1958, pages 294-302.

Veterinary Medicine (from the Latin veterinarius -- caring for livestock, treating livestock) -- a system of general biological and special sciences which study diseases of animals, methods of the prevention and treatment of diseases, as well as problems of increasing the productivity of agricultural animals and means of protecting human beings from diseases peculiar to man and animals (of Zoonoses).

Veterinary medicine as a system of sciences encompasses anatomy (normal and pathological), physiology (normal and pathological), histology, microbiology, special pathology and therapy of internal diseases of agricultural animals; pharmacology, toxicology, general, special, and operative veterinary surgery, obstetrics (with artificial insemination), veterinary-sanitary expertise with technology of animal husbandry products, zoohygiene, epizootology, parasitology, forensic veterinary medicine, and other disciplines.

In ancient times the veterinary care of animals was rendered by scorers, shepherds, and priests in the temples. In ancient Greece and Rome as well as during the Middle Ages and the Renaissance veterinary medicine was chiefly the science of the treatment of horses (hippiatry); among the ancient Greeks were the so-called hippiaters (horse doctors). In certain countries (Iran, China, etc.) veterinary medicine and medicine evolved inseparably; animals and human beings were treated by the same individuals. Problems of veterinary medicine were first brought to light in the works on agriculture by the Roman scholars Cato the Elder

(234-149 B.C.B.), Varro (116-27 B.C.B.), Columella (First Century C.B.), Publius Vegetius Renatus (450-510 C.B.), and the Greek scholar Apsirt [sic] (Fourth Century). In Rome in the First Century there were estate veterinarians, and in the armies there were infirmaries for horses. During the Middle Ages veterinary specialists did not exist. The treatment of horses was the concern of equerries.

In connection with the development of animal husbandry and commerce in animals and animal husbandry products in Europe in the 18th Century the control of epizooties assumed great significance. The need for veterinary specialists arose, and educational institutions to train them were organized. The first veterinary school in Russia was established by Peter the Great in 1733 in Khoroshev near Moscow, later (1762) in Lyons, France, in Al'for [?] (1765), in Copenhagen (1773), in Vienna (1777), and other cities of Europe.

At first veterinary medicine was subordinated to the medical organs. Gradually in most states veterinary medicine was assigned to special organizations of a particular ministry (agriculture, internal affairs). In connection with the development of international relations in the 19th Century the need arose for a veterinary border inspection for the protection of states from the carriage of epizooties.

The first information in Russia concerning "horse doctors" dates to the 15th Century. In the 17th Century there were special individuals in the stable department for the treatment of horses (horse doctors, horse-doctor apprentices, etc.) and special infirmaries, so-called "medical stables." Special measures were effected for the control of epidemic diseases and regulated by special decrees (strict quarantines, barriers, etc.). Under Peter the Great a number of decrees (ukases) concerning the control of epizooties and providing for the execution of quarantines, regulation of livestock slaughter, and inspection and condemnation of meat was issued. In 1707 Peter the Great issued ukases on the assembly in Moscow of horse doctors from the cities and provinces to be selected for service in dragoon regiments.

In 1808 veterinary departments were organized at St. Petersburg, Moscow -- and in 1818 -- Vil'nyus medico-surgical academies, which turned out the first veterinary physicians. Subsequently veterinaries were graduated from veterinary schools of Yur'yev, Warsaw, and Khar'kov. The last-named was transformed into an academy. The training of infirmery attendants was conducted at these same veteri-

nary schools. The Warsaw school and Khar'kov academy had the right to confer the title of veterinary physician and the academic degree of master /magistr/ of veterinary sciences. In 1873 Yur'yev and Khar'kov veterinary academies were transformed into veterinary institut and simultaneously a veterinary institute in Kazan' was opened.

In the 19th Century the first periodical literature began to be published -- the journals "Yezhenedel'nik dlya Okhotnikov do Loshadey" (Weekly for Horse-Fanciers) (1823), "Zapiski Veterinarnoy Meditsiny i Skotovodstava" (Notes of Veterinary Medicine and Livestock Raising) (1846-1848), "Zapiski Veterinarnoy Meditsiny" (1853-1868), and "Zhurnal Veterinarnoy Meditsiny" (Journal of Veterinary Medicine) (1840). In 1871 the journal "Arkhiv Veterinarnykh Nauk" (Archives of Veterinary Sciences), and in 1889 "Vestnik Obshchestvennoy Veterinarii" (Herald of Public Veterinary Medicine), in St. Petersburg, "Veterinarnyy Vestnik" (Veterinary Herald) (1882-1895) in Khar'kov, and "Veterinarnoye Obozreniye" (Veterinary Review) (1899-1918), "Uchenyye Zapiski Kazanskogo Veterinarnogo Instituta" (Scientific Notes of Kazan' Veterinary Institute) (1883-1884), and "Sbornik Trudov Khar'kovskogo Veterinarnogo Instituta" (Collection of Works of Khar'kov Veterinary Institute) (1889), in Moscow were published. For veterinary fel'dshers the journal "Veterinarnyy Fel'dsher" (Veterinary Fel'dsher) was published in 1897. The journal "Veterinariya" (Veterinary Medicine) has been published to the present time (1958).

There were two /veterinary/ societies in Russia prior to 1890 -- a St. Petersburg one (since 1846) and a Moscow one (since 1881). From 1890 to 1900 twelve additional societies were organized, the purpose of which were the bringing of specialists together, the study of animal diseases, the development of statistical data on livestock epizooty, assistance in the construction of slaughter-houses, organization of popular science lectures, publication of special literature, etc.

In 1903, 1910, and 1914 conventions of veterinarians were held.

In the development of veterinary medicine in Russia a well-known role was played by zemstvo /district council/ veterinary medicine, which was organized in 1864. In 34 guberniyas the execution of measures against epizooties was entrusted to the zemstvos. The management of veterinary affairs was isolated from the medical administration only in 1901 and was concentrated in the Veterinary Administration of the Ministry of Internal Affairs, which in 1902 adopted a law on veterinary-police measures, prevention of

animal epidemics, and decontamination of animal raw material products.

To protect the borders from the carrying of epizootics and to control the latter, a protective-quarantine belt on the borders with Turkey, Iran, and China extending approximately 11,000 kilometers was organized with two anti-plague stations and two chambers for the disinfection of hides, 87 protective-sanitary points, and 300 railroad and ground veterinary points.

At the beginning of the first world war instead of a unified veterinary service, there were state, zemstvo, municipal, slaughter-house, horse-breeding, and military veterinary services. Such a splintering hindered the development of veterinary medicine. The first world war and the subsequent civil war brought tremendous disorder into the agricultural life of the country, including animal husbandry. As a consequence of the mobilization of most of the veterinary physicians into the tsarist army many border protective-quarantine belts and veterinary hospitals and points were closed. At the fronts a mass loss of horses began, cattle plague broke out in a considerable part of European Russia (during the period 1917-1921 more than 600,000 head died), sheep scabies assumed the character of an epizootic, and more than six percent of the horses was infected with glanders. Considerably prevalent were cattle peripneumonia, malignant anthrax, hoof-and-mouth disease, tuberculosis, etc.

In 1919 a resolution of the Council of People's Commissars signed by V.I. Lenin transferred the overall management of veterinary affairs in the Soviet republic to the People's Commissariat of Agriculture. In 1918 and 1919 all Russian conferences and conventions of veterinary specialists were convoked. Taking an active part in organizational work in veterinary medicine during the first years of the Soviet regime, M.I. Kalinin, who, in a speech on 27 November 1921 at a convention of veterinary workers, stated "Veterinary medicine, which under the tsarist regime closeted itself somewhere in the background, now in a proletarian country occupies an honorable place." In 1923 the Veterinary Charter of the RSFSR, and in 1936 the Veterinary Charter of the USSR, was approved.

In the first years of the Soviet regime scientific research institutes were organized, the work of old veterinary higher educational institutions was reorganized and new ones arose in Moscow, Leningrad, Saratov, Novocherkassk, Omsk, Vitebsk, and other cities.

At the present time the management of veterinary-

practical measures and the training of veterinary cadres in the USSR is the responsibility of the Ministry of Agriculture USSR: scientific research work in veterinary medicine is directed by the All-Union Academy of Agricultural Sciences imeni V.I. Lenin (VASKhNIL).

Departmental veterinary service in sovnarkhozes and at enterprises of meat-and-dairy, light, and timber industry is governed by regulations, instructions, and directives approved by the Main Administration of Veterinary Medicine of the Ministry of Agriculture USSR. The basic principles of veterinary work (practice) in the USSR are determined by the Veterinary Charter. Management of veterinary affairs is exercised by the Ministry of Agriculture USSR (cf. chart on pp 299-300).

The chief tasks of veterinary medicine as a field of practical activity are as follows: the execution of anti-epizootic, veterinary-sanitary, and medico-prophylactic measures in kolkhozes, sovkhozes, and other managements against contagious animal diseases and especially zoonoses; the organization and execution of veterinary measures in the country assuring the fulfillment of state plans for the development of animal husbandry and raising the products of animals in kolkhozes and sovkhozes; the organization of measures for controlling mass contagious diseases of agricultural animals, especially of the young; the realization of veterinary-sanitation measures and expertise in the procurement, maintenance, fattening, transportation, and driving of cattle, in the processing of animals for meat as well as in the marketing of meat, milk, and meat-and-dairy products; supervision over the procurement, storage, and processing of raw animal products (leather-fur raw material, wool, bristle, etc.); protection of the USSR from the carriage of animal and fowl diseases from other countries, participation in the insurance of agricultural animals.

In the execution of planned veterinary-prophylactic measures animals are examined for tuberculosis, brucellosis, glanders, helminthiases (fascioliasis, dictyocaulosis, etc.), and animals which have contracted scabies and other diseases are detected. During epizootic outbreaks inoculations are effected against malignant anthrax, hoof-and-mouth disease, and swine fever and erysipelas, fowl plague, etc. Measures for eliminating and preventing sterility (barrenness) are taken and animals are treated against warble fly and other invasions. Veterinary-sanitation, disinfection, and insect- and rat exterminating measures are conducted in animal husbandry farms. Control is exercised over the layout of cattle burial grounds and their elimination on the territory

of established reservoirs.

In the development of veterinary science a large part was played by the "Three-year Plan of Development of Public Kolkhoz and Sovkhoz Animal Husbandry" (1949-1951) as well as by the September (1953) resolution of the CC CPSU.

In the meat-and-dairy, light, and timber industry and in sovnarkhozes of veterinary enterprises measures are conducted by departmental services.

At enterprises procuring and fattening slaughter-cattle and processing, preserving, and selling food products and animal raw material (procurement-fattening bases, meat combines, refrigerated slaughter-houses, sausage factories, cattle-slaughtering points, leather raw material bases, tanneries, fur factories, wool-washing bases, kolkhoz markets, etc.) the veterinary-sanitation inspection and expertise of meat, milk, fish, fat, endocrine and leather-fur raw material, fur, wool, intestines, bristle, hair, horns, hooves, bone, scrapings, etc., are conducted. Products and raw material obtained from animals suffering from infectious or invasion diseases are rejected or subjected to detoxication by thorough boiling (meat) or disinfection (hides, hair, bristle). Veterinary measures are also conducted in fur breeding, fish-breeding, and apiculture.

A characteristic feature of veterinary measures is the estimation of their economic effectiveness.

The scientific research work in the field of veterinary medicine is concentrated in the scientific research institutes, veterinary higher educational institutions, and experimental stations.

Below are listed the principal scientific research institutions: All-Union Institute of Experimental Veterinary Medicine (VIEV) founded in 1917. This institute developed and put into use the following: formol vaccines against cattle black quarter, swine erysipelas, lamb dysentery and vaccines against anthrax, hoof-and-mouth disease, Aueski's disease, horse encephalomyelitis, fowl pseudoplague, serums against paratyphoid of young pigs, lamb dysentery, and Aueski's disease; preparations for the treatment of horse and camel tripanosomes, pyroplasmosis, nuttalliosis, and sheep scabies; medico-prophylactic methods of treating swine plague, animal brucellosis, and infectious anemia of horses. All-Union Institute of Helminthology imeni K.I. Skryabin (VIGIS), founded in 1920, in which the helmintho-fannistic status of the USSR was developed, the focal character and epizootological laws of many helminthoses of agricultural animals were determined, and the cycles of development and methods of diagnosis of a number of helminthoses





1. Main Administration of Veterinary Medicine of the Ministry of Agriculture USSR
2. Administration of Agricultural Higher Educational Institutions and Science of the Ministry of Agriculture USSR
3. All-Union Academy of Agricultural Sciences imeni Lenin (VASKhNIL)
4. Trust of Zooveterinary Supply
5. Trust of Veterinary Biological Preparations
6. State Scientific Control Institute for Veterinary Preparations
7. Lenin State Institute for the Advanced Training of Physicians
8. Veterinary Higher Educational Institutions and Technical Schools
9. Administrations of Veterinary Medicine under the ministries of agriculture of the union republics
10. Veterinary sections of administrations of agriculture of oblasts, krais, and autonomous republics
11. Veterinary-sanitation service on railroad and water transport
12. Veterinary-sanitation services of sovnarkhozes
13. Schools of junior veterinary fel'dshers
14. Republic, kray, and oblast veterinary bacteriological laboratories
15. Veterinary-sanitation services in enterprises of the meat, dairy, light, and timber industry
16. All-Union Institute of Helminthology imeni Skryabin (VIGIS)
17. All-Union Institute of Experimental Veterinary Medicine (VIEW)
18. All-Union Scientific Research Institute of Veterinary Sanitation and Ectoparasitology (VNIIVSE)
19. Interrayon veterinary bacteriological laboratories
20. Mobile veterinary bacteriological laboratories
21. Disinfecting detachments
22. Chief veterinary physician of rayon
23. Scientific research institutes, specialized scientific veterinary experimental stations
24. Rayon veterinary hospitals and municipal veterinary polyclinics
25. Veterinary districts and points of MTS
26. Meat-dairy-food stations at markets
27. Veterinary physicians in kolkhozes and sovkhozes
28. Veterinary physicians of rayon and rural livestock-slaughtering points
29. Note: Solid line represents administrative authority, dotted line represents scientific-methodical or special authority

were interpreted; and a system of therapeutic and prophylactic measures was developed. All-Union Scientific Research Institute of Veterinary Sanitation and Ectoparasitology (VNIIVSE), founded in 1955, contains the following laboratories: veterinary sanitary expertise of products of animal husbandry, veterinary disinfection, veterinary mycology, veterinary sanitation, therapy, and prophylaxis of cutaneous diseases of agricultural animals, veterinary radiobiology and isotopes, veterinary entomology, and laboratories of biochemistry and mechanization. The institute and the laboratories belonging thereto devised methods of studying tanning raw material for anthrax, methods of disinfecting it, mechanized disinfection devices, methods of disinfecting the integument of animals, etc. State Scientific Control Institute of Veterinary Preparations, founded in 1931, exercise state control of all biopreparations and the supplying of manufacturing establishments with strains, matrices and viruses for the manufacture of appropriate preparations, the devising of standards (methods) of manufacture, control, and use of preparations for veterinary purposes. Ukrainian Institute of Experimental Veterinary Medicine (VIEV), founded in 1921, which conducts work in the manufacture of biopreparations as well as studies in glanders, tuberculosis, brucellosis, and infectious anemia of horses and in parasitic and fungous diseases of agricultural animals, etc. Veterinary Department of the All-Union Academy of Agricultural Sciences imeni V.I. Lenin, organized in 1936, which coordinates and unifies the work of the scientific research institutes (VIEV, VIGIS, VNIIVSE), stations, veterinary higher educational institutions, and leading practical physicians.

The training of veterinarians is the concern of the veterinary academy, veterinary institute, and veterinary faculties of agricultural institutes. Veterinary technicians (fel'dshers) are trained by veterinary, veterinary-zootechnical technical schools, and veterinary departments of agricultural technical schools. Junior veterinary fel'dshers and orderlies are trained in oblasts, krais, and autonomous republics on the base of practical establishments.

In 1957 there were 42,140 veterinarians, 49,720 veterinary technicians and fel'dshers, and more than 100,000 junior veterinary fel'dshers and orderlies in the country.

Topics of veterinary medicine in the USSR are reported in the journal "Veterinariya" (Veterinary Medicine) as well as in the works of scientific research institutes and other publications.

## Military Veterinary Medicine

[Following is the translation of the entry signed by A. Penionzhko entitled "Veterinariya voyennaya" (English version above) in Bol'shaya Meditsinskaya Entsiklopediya, Vol V, 2nd Ed, Moscow, 1958, pages 302-304.]

Military Veterinary Medicine The veterinary servicing of troops of the Soviet Army and Navy is exercised by the Military-Veterinary Service (VVS).

In Russia military veterinary medicine came into being with the appearance of the regular army in the 18th century. The manning of it with specialists with higher education -- graduates of the veterinary departments of the St. Petersburg and Moscow Medico-Surgical Academies -- was begun in 1812. In subsequent years the army was staffed with veterinarians made up of graduates of other higher educational institutions. At first veterinarians existed only in the regiments. In 1852 corps veterinaries, who unified the work of the regimental veterinarians, and in 1864, district (okrug) veterinaries, were introduced. In 1882, a law on the rights and duties of regimental veterinarians was issued for the first time, and regulation of the veterinary supply of the army was established. During this period considerable attention began to be paid to antiepidemic measures; the following bacteriological stations were opened by the military department: the Khar'kov, Yur'yev, Don, and Tversk, and the Transbaykal Antiplague Station. In 1895 the directing organ of military veterinary medicine was formed in the GUM /State Medical Administration/ -- the Military Veterinary Department. In the military districts and corps in 1902 and in the War Ministry in 1910 the veterinary service was separated from the medical and made an independent service, subordinate to the war ministry.

The organizational independence of the military-veterinary service, the growth of cadres, and the achievements of veterinary science exerted a beneficial effect upon the veterinary-sanitary status of the army.

The disruption of the national economy of the country caused by the first world war, shortcomings in the organization of the veterinary service, and a number of other reasons occasioned a considerable rise in glanders, anthrax, scabies, and other diseases in the period 1914-1917.

Formation of the military-veterinary service of the Red Army began with the first days of the army's organization. An order of the People's Commissariat of the Army and Navy of 8 May 1918 appointed a Collegium of Veterinary Administration, subsequently transformed into the Main Veterinary Administration. During the same year a veterinary unit was introduced into the divisions and regiments being formed and veterinary sections were introduced into armies and fronts.

During the period of peaceful construction (1921-1940) considerable attention was paid to the training and refresher training of cadres, to scientific research, preventive, and antiepidemiologic work, and to the improvement of medical treatment. As a result of planned measures the epidemiologic condition of the army sharply improved. By 1924 glanders and scabies were eliminated. During this period new precepts and directions in regard to the military-veterinary service during peace and wartime were developed and tables and norms of supply were compiled. By the start of World War II the military-veterinary service possessed the required establishments, qualified personnel, and reserves of veterinary equipment.

During World War II the military-veterinary service of the field forces and districts was united under the direction of the Veterinary Administration. Field veterinary medico-evacuation establishments, laboratories, and depots furnished with modern equipment and transport were deployed in the field forces.

The basic tasks of the military-veterinary service are as follows: the organization and execution of prophylactic, antiepidemiologic and medico-evacuation measures among army animals; the veterinary inspection of the army meat allowance, the servicing of productive herds and auxiliary farms, protection of army personnel from diseases peculiar to human beings and animals; the special training of officers of the veterinary service; the training of farriers; the supplying of veterinary equipment to the troops.

The military-veterinary service has medical and educational institutions, laboratories, veterinary depots, and military veterinary personnel. Jointly with the medical service it executes measures for the control of zoonoses, the servicing of military meat combines, product depots,

and the protection from modern agents of mass affliction, etc.

In foreign armies the military-veterinary service exists as an independent service (Great Britain, the Chinese People's Republic, etc), or as part of the military medical service (United States, etc).

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